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EXAMINER	
SULLIVAN, DANIELLE D	
ART UNIT	PAPER NUMBER
1617	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/596,677	KARL ET AL.	
	Examiner	Art Unit	
	DANIELLE SULLIVAN	1617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 June 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *34-73* is/are pending in the application.

4a) Of the above claim(s) *34-36,39-62,66 and 70* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *37,38,63-65,67-69 and 71-73* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☒ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *6/21/2006 and 11/11/2009*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Applicant's preliminary amendment filed 6/21/2006 has been entered. Claims 1-33 were cancelled and new claims 34-73 were added.

Election/Restrictions

Claims 34-36, 39-62, 66 and 70 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 2/28/2011.

Applicant's election with traverse of species B, the acrylic binder of claim 38, in the reply filed on 2/28/2011 is acknowledged. The traversal is on the ground(s) that the instantly claimed acrylic binders are important and unifying element of the claimed subject matter. This is not found persuasive because claims 37 and 38 specify that the component b1b is optional and therefore an unnecessary technical feature of the present composition.

The requirement is still deemed proper and is therefore made FINAL.

Claims 37, 38, 63-65, 67-69 and 71-73 are pending examination.

Priority

Applicant's claim for the benefit of a prior-filed application under 35 U.S.C. 119(e) or under 35 U.S.C. 120, 121, or 365(c) is acknowledged. Applicant has not complied with one or more conditions for receiving the benefit of an earlier filing date under 35

U.S.C. 119 as follows: A reference to the prior application must be inserted as the first sentence(s) of the specification of this application or in an application data sheet (37 CFR 1.76), if applicant intends to rely on the filing date of the prior application under 35 U.S.C. 119(e), 120, 121, or 365(c). For benefit claims under 35 U.S.C. 120, 121, or 365(c), the reference must include the relationship (i.e., continuation, divisional, or continuation-in-part) of all nonprovisional applications. Applicants reference to the earlier application does not include the relationship to the prior application..

Information Disclosure Statement

The information disclosure statement filed 6/21/2006 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

The information disclosure statement filed 11/11/2009 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because English translations of the abstracts have not been provided. It has been placed in the application file, but the information referred to therein has not been considered as to the merits. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609.05(a).

Specification

The disclosure is objected to because it contains an embedded hyperlink and/or other form of browser-executable code. Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP § 608.01.

Hyperlink located on page 11, line 34.

Claim Objections

Claim 38 is objected to because of the following informalities: “nitril” should be spelled “nitrile". Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 65 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicant claims a fixative agent which is an isocyanurate based on HMDI which is hydrophilized with a polyethylene oxide and which is dissolved in propylene carbonate (70% HMDI in 30% propylene carbonate), wherein the amount

of free isocyanate groups is 11-12% by weight, based on amount of isocyanate used as a starting material, but fails to disclose a particular structure.

The factors considered in the written description requirement are (1) *level of skill and knowledge in the art,* (2) *partial structure,* (3) *physical and/or chemical properties*, (4) *functional characteristics alone or coupled with a known or disclosed correlation between structure and function*, and the (5) *method of making the claimed invention.*

While all of the factors have been considered, only those required for a *prima facie* case are set forth below.

Claim 65 only discloses partial structure and fails to disclose a method of making the fixative. The specific isocyanurate monomer is not disclosed, furthermore the abbreviation HMDI has not been properly disclosed with the specific chemical name. The step of hydrophilizing with polyethylene oxide implies there are intermediates which have not been detailed. Therefore adequate written description of the fixative has not been disclosed.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 37, 38, 63-65, 67-69 and 71-73 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since

the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 37 recites the broad recitations “1 to 10% by weight”, and the claim also recites “preferably 1 to 7% by weight” and "more preferably 2 to 5% by weight", in reference to b1d), which is the narrower statement of the range/limitation. The same language is used to limit the scope of b1e1) and b1e2, also similar recitations are within the Markush groups defining R10 and R11 and within the recitations "as component B1B, most preferably component B1B is...", “as component B1D, most preferably X is acetoacetyl”, “component B1E1, preferably….” And “component B1E2, preferably…”). Claim 65 recites the broad recitations “0 g/L to 0.83 g/L”, and the claim also recites “preferably 0.5 g/L to 0.83 g/L”. Claim 67 recites “pyrethroid compounds, preferably …”, “carbamate compounds, preferably …”, organophosphorous compounds, preferably …”, (and many others) etc. Claim 72 recites the broad recitation “netting made from polyester”, and the claim also recites “especially polyethylene terephthalate".

For the purpose of examination the claims have been given there broadest reasonable interpretation and the preferably ranges and components have not been treated as necessary components of the invention.

Claim 65 states "an isocyanurate based on HMDI". It is unclear what the metes and bounds of this term encompass.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 37, 38, 63-65, 67-69 and 71 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marrs et al. (EP0382382; effective date January 26, 1990) in view of Gordon et al. (US 3,713,868; effective date January 30, 1973).

Applicant claims a composition comprising:

a) a least one insecticide and/or repellent as component A, cypermethrin and

b) at least one acrylic binder as component B1, wherein component B1 is obtainable by emulsion polymerization of the following components:

b1a) 81.0 % by weight of n-butylacrylate as component B1A;

b1c) 2.0 % by weight of N-methylol methyacrylamide as component B1C;

b1d) 1.0 % by weight of acrylic acid as component BID;

and b1e1) 16 % by weight of acrylic nitrile as component B1E1.

Applicant also claims impregnated textile, polyester, comprising the composition.

Marrs et al. teach the treatment of fabrics with insecticides and compositions used in the treatment of fabrics by impregnation utilizing pyrethroids selected from cypermethrin which are stable and can be formulated as emulsion concentrates (page 2, lines 1-7). Fabrics treated include synthetic polyester fibers (page 2, lines 29 and

30). The compositions comprise a polymeric substance which may be made synthetically by copolymers acrylonitrile (acrylic nitrile) and acrylate polymers (page 2, lines 40-45). The composition comprises 1-70% of the insecticide and 1-25% of the polymeric substance (page 3, lines 22-26).

Marrs et al. fail to teach the specific polymer combination B1. It is for this reason that Gordon et al. is joined.

Gordon et al. teach acrylic foam-coated fabric which is breathable, opaque, has excellent insulation properties and resistance to water and dry-cleaning solvents but which is flexible and has good hand and drape properties (abstract). The acrylic foam is obtained from 50-100% acrylate monomer, 5-20% nitrile monomer, 0.5-5% unsaturated carboxylic monomer and 0.5-5% amide (Table 10). Acrylates include butyl acrylate, nitriles include acrylonitrile, carboxylic monomer include acrylic acid and amides include methyloloacrylamide (column 3, lines 36-50). Example 2 discloses an example comprising 50% butyl acrylate, 10% acrylonitrile, 1.5% acrylic acid and 2% methylolacrylamide. Example 3 discloses an example comprising 60% butyl acrylate, 15% acrylonitrile, 2% acrylic acid and 1% methylolacrylamide. It would have been routine optimization to adjust the amounts to formulate polymer B1, wherein b1a) is 81.0 % by weight of n-butylacrylate, b1c) is 2.0 % by weight of N-methylol methyacrylamide, b1d) is 1.0 % by weight of acrylic acid and b1e1) is 16 % by weight of acrylic nitrile because Gordon et al. teach the foam is obtained by from 50-100% acrylate monomer (n-butylacrylate), 5-20% nitrile monomer (acrylic nitrile), 0.5-5% unsaturated carboxylic monomer (acrylic acid) and 0.5-5% amide (N-methylol methyacrylamide).

Both Marrs et al. and Gordon et al. teach compositions for the treatment of fabrics. It would have been prima facie obvious at the time of the instant invention to combine the teachings of Marrs et al. and Gordon et al. to formulate a composition comprising cypermethrin and the polymer B1 with a reasonable expectation of success. One of ordinary skill in the art would have been motivated to combine cypermethrin with polymer B1 because Marrs et al. teach polymers are incorporated in polyester nets with cypermethrin were known at the time of invention and Gordon et al. teaches polymers encompassing B1 impart beneficial properties to fabric including breathability, opaqueness, insulation and resistance to water and dry-cleaning solvents while being flexible with excellent drape properties.

Claims 37, 71 and 72 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marrs et al. (EP0382382; effective date January 26, 1990) in view of Gordon et al. (US 3,713,868; effective date January 30, 1973) as applied to claims 37, 38, 63-65, 67-69, 71 and 72 above in further view of Shober et al. (US 6,2147,365; effective date April 10, 2001).

Applicant claims a composition comprising:

a) a least one insecticide and/or repellent as component A, cypermethrin and

b) at least one acrylic binder as component B1, wherein component B1 is obtainable by emulsion polymerization of the following components:

b1a) 81.0 % by weight of n-butylacrylate as component B1A;

b1c) 2.0 % by weight of N-methylol methyacrylamide as component B1C;

b1d) 1.0 % by weight of acrylic acid as component BID;

and b1e1) 16 % by weight of acrylic nitrile as component B1E1 where the netting is made of polyethylene terephthalate.

The teachings of Marr et al. and Gordon et al. are addressed in the above 103 rejection, but fail to teach the netting is made of polyethylene terephthalate. It is for this reason Shober et al. is joined.

Shober et al. teach methods of controlling mites by the use of pyrethroid impregnated netting (column 2, lines 40-56). The netting is made of suitable fibers including polyester (column 3, lines 20-25). Polyethylene terephthalate netting is specified as preferred fibers treated (claim 5).

Shober et al., Marrs et al. and Gordon et al. teach compositions for the treatment of fabrics. It would have been prima facie obvious at the time of the instant invention to combine the teachings of Shober et al., Marrs et al. and Gordon et al. to apply the composition on netting made of polyethylene terephthalate with a reasonable expectation of success. One of ordinary skill in the art would have been suggested to treat netting made of polyethylene terephthalate because Shober et al. teach polyethylene terephthalate fibres are preferred.

Claims 37 and 73 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marrs et al. (EP0382382; effective date January 26, 1990) in view of Gordon et al. (US 3,713,868; effective date January 30, 1973) as applied to claims 37, 38, 63-65, 67-

69, 71 and 72 above in further view of Laas et al. (US 6,777,523; effective date August 17, 2004).

Applicant claims a composition comprising:

a) a least one insecticide and/or repellent as component A, cypermethrin and

b) at least one acrylic binder as component B1, wherein component B1 is obtainable by emulsion polymerization of the following components:

b1a) 81.0 % by weight of n-butylacrylate as component B1A;

b1c) 2.0 % by weight of N-methylol methyacrylamide as component B1C;

b1d) 1.0 % by weight of acrylic acid as component BID;

and b1e1) 16 % by weight of acrylic nitrile as component B1E1 in combination with a fixative agent which is an isocyanurate based on HMDI which is dissolved in propylene carbonate.

The teachings of Marr et al. and Gordon et al. are addressed in the above 103 rejection, but fail to teach the specific fixative which is an isocyanurate based on HMDI which is dissolved in propylene carbonate. It is for this reason Laas et al. is joined.

Laas et al. teach water-dispersible polyisocyanate preparations are important additives for aqueous dispersion adhesives because they are resistant to heat and water (column 1, lines 30-35). The polyisocyanates are synthesized from diisocyanates including 1,4-bis-(isocyanatomethyl)-cyclohexane (HMDI) (column 5, line 17). Suitable solvents include 1,2-propylene carbonate (column 8, line 6). The products produced are clear and colorless and don't require the step of stirring with high shear forces to

product a stable formulation (column 8, lines 13-25). The compositions are used in the treatment of textiles (column 9, lines 59-65).

Laas et al., Marrs et al. and Gordon et al. teach compositions for the treatment of fabrics. It would have been prima facie obvious at the time of the instant invention to combine the teachings of Laas et al., Marrs et al. and Gordon et al. to formulate a composition comprising which is an isocyanurate based on HMDI which is dissolved in propylene carbonate with a reasonable expectation of success. One of ordinary skill in the art would have been motivated to combine a fixative which is an isocyanurate based on HMDI which is dissolved in propylene carbonate because Laas et al. teach polyisocyates of HMDI in propylene carbonate are known to be used in textiles to impart heat and water resistance and are clear and colorless.

Conclusion

No claims allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANIELLE SULLIVAN whose telephone number is (571)270-3285. The examiner can normally be reached on 7:30 AM - 5:00 PM Mon-Thur EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fereydoun Sajjadi can be reached on (571) 272-3311. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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